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United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

REVISED TECHNICAL SPECIFICATION BASES
ARTS/MELLLA IMPLEMENTATION
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

References: 1. LR-N04-0062, "Request for License Amendment: ARTS/MELLLA Implementation," dated June 7, 2004

2. LR-N05-0032, "Supplement to Request for License Amendment: ARTS/MELLLA Implementation," dated February 18, 2005

3. LR-N05-0214, "Response to Request for Additional Information: Request for Change to Technical Specifications: ARTS/MELLLA Implementation," dated August 3, 2005

PSEG Nuclear LLC (PSEG) is incorporating clarifying information into the Technical Specification Bases in support of the license amendment request in Reference 1 to revise the Technical Specifications (TS) for the Hope Creek Generating Station to reflect an expanded operating domain resulting from implementation of Average Power Range Monitor/Rod Block Monitor/Technical Specifications/Maximum Extended Load Line Limit Analysis (ARTS/MELLLA). The amendment request also includes changes in the methods used to evaluate annulus pressurization (AP) and jet loads resulting from the postulated recirculation suction line break (RSLB).

Information regarding the average power range monitor (APRM) flow biased scram, provided in References 1, 2 and 3, is being incorporated into TS Bases 2.2.1. The clarifying information being added to TS Bases 2.2.1 is consistent with the Hope Creek Updated Final Safety Analysis Report (UFSAR).

A001

The revised marked up TS Bases page provided in Attachment 1 to this letter replaces the marked up page provided previously in Reference 1.

PSEG has determined that the information contained in this letter and attachment does not alter the conclusions reached in the 10CFR50.92 no significant hazards analysis previously submitted.

If you have any questions or require additional information, please contact Mr. Paul Duke at (856) 339-1466.

Sincerely,

Darin M. Benyak
Director - Regulatory Assurance

Attachment

C: Mr. S. Collins, Administrator – Region I
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HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354
REQUEST FOR LICENSE AMENDMENT

TECHNICAL SPECIFICATION BASES PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License No. NPF-57 are affected by this change request:

Technical Specification	Page
Bases 2.2.1	B 2-7

ATTACHMENT 1

LR-N06-0061

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS (Continued)

Average Power Range Monitor (Continued)

Because the flux distribution associated with uniform rod withdrawals does not involve high local peaks and because several rods must be moved to change power by a significant amount, the rate of power rise is very slow. Generally the heat flux is in near equilibrium with the fission rate. In an assumed uniform rod withdrawal approach to the trip level, the rate of power rise is not more than 5% of RATED THERMAL POWER per minute and the APRM system would be more than adequate to assure shutdown before the power could exceed the Safety Limit. The 15% neutron flux trip remains active until the mode switch is placed in the Run position.

The APRM trip system is calibrated using heat balance data taken during steady state conditions. Fission chambers provide the basic input to the system and therefore the monitors respond directly and quickly to changes due to transient operation for the case of the Fixed Neutron Flux-Upscale setpoint; i.e, for a power increase, the THERMAL POWER of the fuel will be less than that indicated by the neutron flux due to the time constants of the heat transfer associated with the fuel. For the Flow Biased Simulated Thermal Power-Upscale setpoint, a time constant of 6 ± 0.6 seconds is introduced into the flow biased APRM in order to simulate the fuel thermal transient characteristics. A more conservative maximum value is used for the flow biased setpoint as shown in Table 2.2.1-1. INSERT

The APRM setpoints were selected to provide adequate margin for the Safety Limits and yet allow operating margin that reduces the possibility of unnecessary shutdown. The flow referenced trip setpoint must be adjusted by the specified formula in Specification 3.2.2 in order to maintain these margins when CMFLPD is greater than or equal to FRTP.

3. Reactor Vessel Steam Dome Pressure-High

High pressure in the nuclear system could cause a rupture to the nuclear system process barrier resulting in the release of fission products. A pressure increase while operating will also tend to increase the power of the reactor by compressing voids thus adding reactivity. The trip will quickly reduce the neutron flux, counteracting the pressure increase. The trip setting is slightly higher than the operating pressure to permit normal operation without spurious trips. The setting provides for a wide margin to the maximum allowable design pressure and takes into account the location of the pressure measurement compared to the highest pressure that occurs in the system during a transient. This trip setpoint is effective at low power/flow conditions when the turbine control valve fast closure and turbine stop valve closure trip are bypassed. For a load rejection or turbine trip under these conditions, the transient analysis indicated an adequate margin to the thermal hydraulic limit.

Insert TS Bases 2.2.1

Although it is part of the Hope Creek design configuration and Technical Specifications, the APRM flow-biased simulated thermal power scram is not credited in any Hope Creek safety licensing analyses.